

DOCKET NO: 240441US0

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
HAJIME IKUNO, ET AL. : EXAMINER: MORILLO, J.
SERIAL NO: 10/620,388 :
FILED: JULY 17, 2003 : GROUP ART UNIT: 1742
FOR: PISTON MADE OF ALUMINUM :
CAST ALLOY AND METHOD OF
MANUFACTURING THE SAME

DECLARATION UNDER 37 C.F.R. § 1.132

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

I, Hajime Ikuno, a citizen of Japan,

hereby declare and state that:

1. I have a degree in Master of metallic material engineering, which was conferred upon me in Japan by Osaka University located in 2-1 Yamadaoka, Suita, Osaka.
2. I have been employed by Toyota Central Research & Development Labs., Inc. since 1985 and I have a total of 22 years of work and research experience in the field of Metallic materials.
3. The following experiments were carried out by me or under my direct supervision and control.
4. The experimental conditions used to create Tables 9 and 10 of the specification were used to produce the attached Tables 9+ and 10+.

5. The symbol \circ in Tables 9+ and 10+ has the same meaning as in Tables 9 and 10, namely that "the structure is fine and homogenized" (specification at page 45, lines 9-10).

6. Table 9+ and Fig. 6+, along with Table 9 and Figs. 5-8 from the specification, show that a significant improvement in homogeneous texture is achieved by the invention of independent Claims 1 and 31 in the range of "Ca(Calcium) : 0.0005-0.003 mass%".

7. Table 10+ and Fig. 9+, along with Table 10 and Figs. 9-11 from the specification, show that a significant improvement in homogeneous texture is achieved by the invention of independent Claims 15 and 26 in the range of "Ca(Calcium) : 0.0005-0.003 mass%".

8. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

9. Further declarant saith not.

Date: March 7, 2007

Hajime Kuno

Declarant's Name (typed)

Attached:

Table 9+ (with Fig. 6+)
Table 10+ (with Fig. 9+)

Table 9+

sample No.	chemical composition (mass%)														texture	fig.
	Si	Cu	Mg	Ni	Fe	Mn	Cr	Ti	B	Zr	V	P	Ca			
A+	13.8	32	0	2.3	0.4	0.4	-	0.25	-	0.1	0.1	0.01	0.003	0	fig.9+	

Table 10+

sample No.	chemical composition (mass%)													texture	fig
	Si	Cu	Mg	Ni	Fe	Mn	Cr	Ti	B	Zr	V	P	Ca		
B+	12.8	32	0.7	2.3	0.47	0.46	-	0.23	-	0.1	0.08	0.01	0.0005	0	fig.9+



Fig.6+

(macro-structure of Example A+)

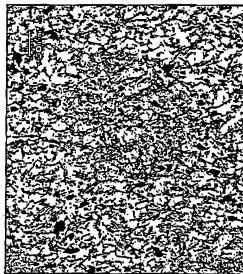


Fig.9+

(micro-structure of Example B+)